DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-018305
Date Inspected: 27-Nov-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC)

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	Li Yang and Zhu Zhong Hai			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

BAY 11 – (Skid More Test)

This QA Inspector witnessed Bolt Testing for ASTM A490 Grade. Observed ZPMC QC Mr. Zou Jian performing bolts testing and ZPMC QA Inspector Mr. Lay Tao was present during the course of Bolt Testing.

The testing of bolts was performed to determining Nut Rotation from Snug-Tight condition for Turn-of-Nut Pre-tensioning and High Tension bolt capability verification test.

Bolt assembly identified as ASTM A490 (High Strength Bolt), Bolt Assembly comprises of (a Bolt, a Nut and a Washer).

Bolt testing was performed on a Unit: Skidmore-Wilhelm; Model: HT; Serial Number: 1014 (Calibration Expiration due date on April 29, 2011) and Torque Wrench identified as XO-326 and Torque Wrench with Dial gauge on it is identified as XO-2 (Calibration Expiration due date on April 14, 2011).

Tested bolt sizes were identified as M30x160 RC Set# DH4DM30018.

5 bolt assemblies were tested per lot.

After determining Nut Rotation from Snug-Tight condition for Turn-of-Nut Pre-tensioning Inspection Report # 18 for bolt size M30x160 was generated by ZPMC QA.

After determining High Tension bolt capability verification test Inspection Report # 256 for bolt size M30x160 was generated by ZPMC QA.

The generated reports were submitted to the Caltrans Lead Inspector Mr. Mark Miller and Caltrans Engineer Mr. Aaron Prchlik for review and disposition.

Segment 11AE, Segment 11BE, Segment 11CE, Segment 11DE and Segment 11EE (Longitudinal Diaphragm Cope Holes)

This QA Inspector performed Dimension Control Inspection for the Segment 11AE, Segment 11BE, Segment 11CE, Segment 11DE and Segment 11EE and measured the Cope hole dimensions located at the Longitudinal Diaphragms (West side) at the following locations:

Segment 11AE at Panel Point (PP) 95 at West side of work point E4 and work point E3.

Segment 11BE at Panel Point (PP) 98 at West side of work point E4 and work point E3.

Segment 11CE at Panel Point (PP) 101 at West side of work point E4 and work point E3.

Segment 11DE at Panel Point (PP) 104 at West side of work point E4 and work point E3.

Segment 11EE at Panel Point (PP) 107 at West side of work point E4 and work point E3.

The QA Inspector measured the cope holes dimension using a 150mm steel ruler.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 11AE, Segment 11BE, Segment 11CE and Segment 11DE (Re-entrant Corners)

This QA Inspector performed Dimension Control Inspection for the Segment 11AE, Segment 11BE, Segment 11CE and Segment 11DE and measured the Re-entrant Corner radius. The QA Inspector measured the radius of re-entrant corner using a pre-cut 25mm and 50mm template. Re-entrant Corners radius was measured at the following locations:

The re-entrant corner at the Floor Beam vertical flange radius was verified and measured at Segment 11AE at

Panel Point (PP) 95 at West side of work point E4 and work point E3.

The re-entrant corner at the Floor Beam vertical flange radius was verified and measured at Segment 11BE at Panel Point (PP) 98 at West side of work point E4 and work point E3.

The re-entrant corner at the Floor Beam vertical flange radius was verified and measured at Segment 11CE at Panel Point (PP) 101 at West side of work point E4 and work point E3.

The re-entrant corner at the Floor Beam vertical flange radius was verified and measured at Segment 11DE at Panel Point (PP) 104 at West side of work point E4 and work point E3.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 11DE (Corner Assembly hold back weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA093-002. The welder identification was 040320 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as Edge Panel to Deck Panel hold back weld at work point E5. ZPMC performed repair welding in accordance with Welding Repair Report B-WR17822.

Please reference the pictures attached for more comprehensive details.

Segment 11EE (Corner Assembly hold back weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg072-049. The welder identification was 040320 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as Edge Panel to Deck Panel hold back weld at work point E5. ZPMC performed repair welding in accordance with Welding Repair Report B-WR17822.

Segment 11DE (Side Panel to Bottom Panel hold back weld)

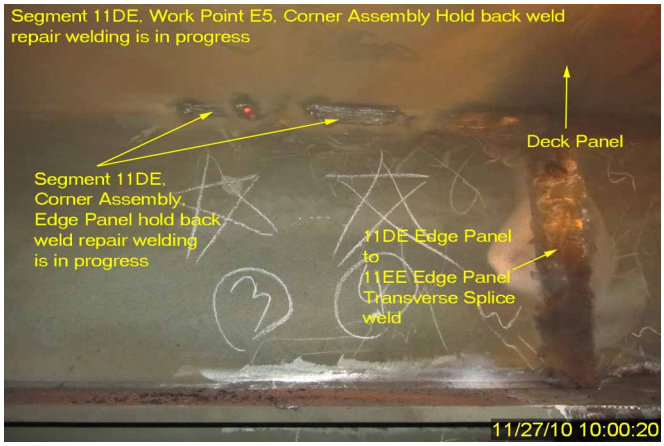
This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg072A-044. The welder identification was 056289 and was observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G(1F)-FCM-Repair-1. The piece mark was identified as Side Panel to Bottom Panel hold back weld at work point E3. ZPMC performed repair welding in accordance with Welding Repair Report B-WR17823.

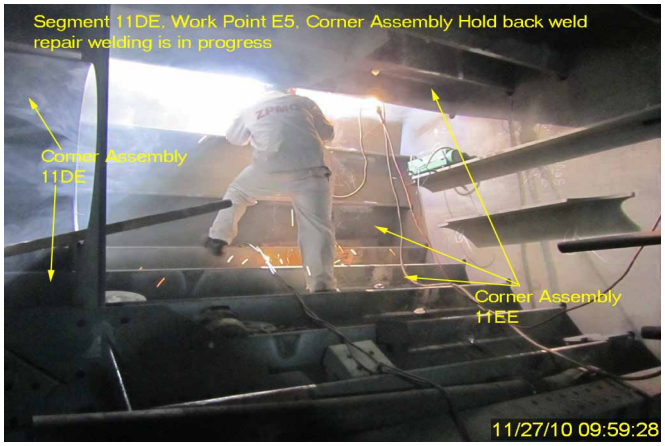
Segment 11EE (Side Panel to Bottom Panel hold back weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg074A-014. The welder identification

was 056289 and was observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G(1F)-FCM-Repair-1. The piece mark was identified as Side Panel to Bottom Panel hold back weld at work point E3. ZPMC performed repair welding in accordance with Welding Repair Report B-WR17823.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer